

Amendments to the Claims

The listing of claims will replace all prior versions, and listings of claims in the application.

1. (Currently Amended) A method for identifying frequently accessed domain names in a ~~customer premises equipment personal computer~~ that includes a memory and a communication interface, the frequently accessed domain names to be provided to a network gateway for use in domain name system caching, comprising the steps of:

(a) searching files in the memory to identify the frequently accessed domain names; and

(b) providing the frequently accessed domain names to the communication interface for transmission to the network gateway over a communication path;

wherein the files in the memory comprise application data files that hold frequently accessed domain names.

2. (Currently Amended) The method of claim 1, wherein the ~~customer premises equipment personal computer~~ runs an operating system, and wherein said searching and said providing steps (a) and (b) are initiated during start-up of said the operating system.

3. (Currently Amended) The method of claim 1, wherein the ~~customer premises equipment personal computer~~ runs an operating system, and wherein said

~~searching and said providing steps (a) and (b)~~ are initiated periodically by ~~said the~~ operating system.

4. (Currently Amended) The method of claim 1, wherein ~~said searching and said providing steps (a) and (b)~~ occur in response to the execution of an application by a user of the ~~customer premises equipment personal computer~~.

5. (Currently Amended) The method of claim 1, wherein ~~said searching files step (a)~~ comprises searching application data files associated with a Web browser application.

6. (Currently Amended) The method of claim 1, wherein ~~said searching files step (a)~~ comprises searching application data files associated with an electronic mail application.

7. (Currently Amended) The method of claim 1, wherein ~~said providing the frequently accessed domain names to the communication interface step (b)~~ comprises packetizing the frequently accessed domain names and providing ~~said the~~ packetized information to the communication interface.

8. (Currently Amended) The method of claim 1, wherein ~~said providing the frequently accessed domain names to the communication interface step (b)~~ comprises

storing the frequently accessed domain names in a management information base and providing said the management information base to the communication interface.

9. (Currently Amended) The method of claim 1, wherein said providing the frequently accessed domain names to the communication interface step (b) comprises generating a domain name system query that includes said the frequently accessed domain name and providing said the domain name system query to the communication interface.

10. (Currently Amended) A method for selectively caching domain name system information on a network gateway that includes a cache, wherein the network gateway is attached to a customer premises equipment personal computer that includes a memory, comprising the steps of:

- (a) searching files in the memory to identify a frequently accessed domain name;
- (b) providing said the frequently accessed domain name from the customer premises equipment personal computer to the network gateway;
- (c) generating, in the gateway, a domain name system query that includes said the frequently accessed domain name;
- (d) transmitting said the domain name system query from the network gateway to a network for resolution;
- (e) receiving, in the gateway, a response to said the domain name system query from said the network that includes said the frequently accessed domain name and a corresponding IP address; and

(f) storing said the frequently accessed domain name and said the corresponding IP address in the cache;
wherein the files in the memory comprise application data files that hold
frequently accessed domain names.

11. (Currently Amended) The method of claim 10, wherein the customer premises equipment personal computer runs an operating system, and wherein said searching and said providing steps (a) and (b) are initiated during start-up of said the operating system.

12. (Currently Amended) The method of claim 10, wherein the customer premises equipment personal computer runs an operating system, and wherein said searching and said providing steps (a) and (b) are initiated periodically by said the operating system.

13. (Currently Amended) The method of claim 10, wherein said searching and said providing steps (a) and (b) occur in response to the execution of an application by a user of the customer premises equipment personal computer.

14. (Currently Amended) The method of claim 10, wherein said searching files step (a) comprises searching application data files associated with a Web browser application.

15. (Currently Amended) The method of claim 10, wherein ~~said searching files step (b)~~ comprises searching application data files associated with an electronic mail application.

16. (Currently Amended) The method of claim 10, wherein ~~said providing said frequently accessed domain name to the network gateway~~ step (b) comprises packetizing ~~said the~~ frequently accessed domain name and transmitting ~~said the~~ packetized information to the network gateway.

17. (Currently Amended) The method of claim 10, wherein ~~said providing said frequently accessed domain name to the network gateway~~ step (b) comprises storing ~~said the~~ frequently accessed domain name in a management information base and providing ~~said the~~ management information base to the network gateway.

18. (Currently Amended) The method of claim 10, wherein ~~said transmitting said domain name system query from the network gateway to a network for resolution~~ step (d) comprises transmitting ~~said the~~ domain name system query to a domain name server on ~~said the~~ network for resolution.

19. (Currently Amended) The method of claim 10, wherein ~~said generating a domain name system query~~ step (c) comprises generating a domain name system query in accordance with an iterative resolution protocol.

20. (Currently Amended) The method of claim 10, further comprising:

(g) receiving, in the network gateway, a domain name system query from the ~~customer premises equipment personal computer~~; and

(h) resolving, in the network gateway, said the domain name system query from the ~~customer premises equipment personal computer~~ using a domain name and corresponding IP address stored in the cache.

21. (Currently Amended) A method for selectively caching domain name system information on a network gateway that includes a cache, wherein the network gateway is attached to a ~~customer premises equipment personal computer~~ that includes a memory, comprising the steps of:

(a) searching files in the memory to identify a frequently accessed domain name;

(b) generating, in the ~~customer premises equipment personal computer~~, a domain name system query that includes said the frequently accessed domain name;

(c) providing said the domain name system query from the ~~customer premises equipment personal computer~~ to the network gateway;

(d) transmitting said the domain name system query from the network gateway to a network for resolution;

(e) receiving, in the gateway, a response to said the domain name system query from said the network that includes said the frequently accessed domain name and a corresponding IP address; and

(f) storing said the frequently accessed domain name and said the corresponding IP address in the cache;

wherein the files in the memory comprise application data files that hold frequently accessed domain names.

22. (Currently Amended) A ~~customer premises equipment personal computer~~, comprising:

a memory that stores files, wherein the files comprise application data files that hold frequently accessed domain names;

a communication interface for transmitting information to a network gateway; and

a processor coupled to said the memory and said the communication interface; wherein said processor is configured to search said the files in the memory to identify frequently accessed domain names and to provide said the frequently accessed domain names to said the communication interface for transmission to said the network gateway.

23. (Currently Amended) The ~~customer premises equipment personal computer~~ of claim 22, wherein said the memory comprises a hard disk drive.

24. (Currently Amended) The ~~customer premises equipment personal computer~~ of claim 22, wherein said the communication interface is a home phoneline network interface, an Ethernet interface or a Universal Serial Bus interface.

25. (Currently Amended) The ~~customer premises equipment personal computer~~ of claim 22, wherein said the application data files are associated with a Web browser application.

26. (Currently Amended) The ~~customer premises equipment personal computer~~ of claim 22, wherein said the application data files are associated with an electronic mail application.

27. (Currently Amended) The ~~customer premises equipment personal computer~~ of claim 22, wherein said the processor is configured to provide said the frequently accessed domain names to said the communication interface by packetizing said the frequently accessed domain names and providing said the packetized information to said the communication interface.

28. (Currently Amended) The ~~customer premises equipment personal computer~~ of claim 22, wherein said the processor is configured to provide said the frequently accessed domain names to said the communication interface by storing said the frequently accessed domain names in a management information base and providing said the management information base to said the communication interface.

29. (Currently Amended) The ~~customer premises equipment personal computer~~ of claim 22, wherein said the processor is configured to provide said the frequently accessed domain names to said the communication interface by generating a

domain name system query that includes said the frequently accessed domain name and providing said the domain name system query to said the communication interface.

30. (Currently Amended) A system for selectively caching domain name system information in a network gateway, comprising:

a ~~customer premises equipment (CPE)~~ personal computer (PC) including a memory that stores files, a communication interface for transmitting information over a communication path, and a CPE PC processor coupled to said the memory and said the communication interface, wherein said the CPE PC processor is configured to search said the files to identify a frequently accessed domain name and to provide said the frequently accessed domain name to said the communication interface for transmission over said the communication path; and

a network gateway including a cache, a CPE PC interface for receiving information over said the communication path, a network interface for transmitting information over a network, and a gateway processor coupled to said the cache, said the CPE PC interface, and said the network interface, said the gateway processor configured to receive said the frequently accessed domain name from said the communication path via said the CPE PC interface, to generate a domain name system query that includes said the frequently accessed domain name, to provide said the query to said the network interface for transmission to a network for resolution, to receive a response to said the query from said the network via said the network interface that includes said the frequently accessed domain name and a corresponding IP address, and to store said the

frequently accessed domain name and said the corresponding IP address in said the cache;

wherein the files in the memory comprise application data files that hold
frequently accessed domain names.

31. (Currently Amended) The system of claim 30, wherein said the memory in said customer premises equipment the personal computer comprises a hard disk drive.

32. (Currently Amended) The system of claim 30, wherein said the communication path is a home phoneline network, an Ethernet, or a Universal Serial Bus.

33. (Currently Amended) The system of claim 30, wherein said the application data files are associated with a Web browser application.

34. (Currently Amended) The system of claim 30, wherein said the application data files are associated with an electronic mail application.

35. (Currently Amended) The system of claim 30, wherein said CPE the PC processor is configured to provide said the frequently accessed domain name to said the communication interface by packetizing said the frequently accessed domain name and providing said the packetized information to said communication interface.

36. (Currently Amended) The system of claim 30, wherein ~~said CPE~~ the PC processor is configured to provide said the frequently accessed domain name to said the communication interface by storing said the frequently accessed domain name in a management information base and providing said the management information base to said the communication interface.

37. (Currently Amended) The system of claim 30, wherein said the network interface transmits said the query to a domain name server on said the network for resolution.

38. (Currently Amended) The system of claim 30, wherein said the gateway processor is configured to generate said the domain name system query in accordance with an iterative resolution protocol.

39. (Currently Amended) A computer program product comprising a computer useable medium having computer program logic for enabling a processor in a ~~customer premises equipment~~ personal computer to identify frequently accessed domain names to be provided to a network gateway for use in domain name system caching, the ~~customer premises equipment~~ personal computer further including a memory and a communication interface, comprising:

means for enabling the processor to search files in the memory to identify the frequently accessed domain names; and

means for enabling the processor to provide the frequently accessed domain names to the communication interface for transmission to the network gateway;
wherein the files in the memory comprise application data files that hold frequently accessed domain names.

40. (Currently Amended) The computer program product of claim 39, wherein said the application data files for comprise application data files associated with a Web browser application.

41. (Currently Amended) The computer program product of claim 39, wherein said the application data files comprise application data files associated with an electronic mail application.

42. (Currently Amended) The computer program product of claim 39, wherein said the means for enabling the processor to provide the frequently accessed domain names to the communication interface comprises means for enabling the processor to packetize the frequently accessed domain names and provide said the packetized information to the communication interface.

43. (Currently Amended) The computer program product of claim 39, wherein said the means for enabling the processor to provide the frequently accessed domain names to the communication interface comprises means for enabling the

processor to store the frequently accessed domain names in a management information base and provide said the management information base to the communication interface.

44. (Currently Amended) The computer program product of claim 39, wherein said the means for enabling the processor to provide the frequently accessed domain names to the communication interface comprises means for enabling the processor to generate a domain name system query that includes said the frequently accessed domain name and provide said the domain name system query to the communication interface.